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Sustainable Rose Growing & The Breeding of New Roses The View From India

Viru Viraraghavan

Sustainable rose growing is a subject which deserves to be center stage in the warm Indian climate, and indeed, in all other warm climates of the world, where disease problems are at their worst. What do we mean by "sustainable rose growing"? "Sustainable" in the broad sense means "something which can be maintained" and for the environmentally conscious, as all of us rose growers should be, it means 'maintenance without adverse environmental impact'. Unfortunately, standard rose growing practices in India are quite often the very reverse of sustainable, burdened as the Indian rose grower is with growing roses, raised in temperate climates, under tropical conditions. Ask a keen rose grower in India whether you can grow roses, and the response will be an enthusiastic "yes", but further enquiry will reveal the amount of exertion involved - weekly combination sprays with fungicides and insecticides is the easiest part. The environmental impact of such practices is significant, and it is no surprise, considering the amount of hard work involved that rose growing is confined to the real enthusiast or keen exhibitor,

The pioneering rose hybridizer, B.S. Bhattacharji put the matter in simple words: - he was writing in the 1930's - that rose growing is for the pleasure of raising beautiful flowers under normal care. As a hands-on horticulturist what he meant by 'normal care' was that there was no need to display the over-enthusiasm of the rose exhibitor, but at the same time you could not expect to grow a rose without giving it the care which you would bestow on raising tomatoes or cauliflowers in your vegetable patch.

If we are to have easily grown roses - such rose varieties as can be grown under normal care, the basic requirement is growing roses which have reasonable resistance to fungus problems. Here again a note of caution is very much required. Rose breeders should not fall into the trap of striving for roses with that mirage 'immunity', but look to develop such plants which have the capacity to recover from infection without the use of fungicides. Rose varieties touted as immune to fungus problems have an alarming habit of suddenly becoming vulnerable as the fungus evolves faster than the rose's capacity to defend itself. A case in point is 'Baby Love', which was completely resistant to Black Spot in my tropical mountain climate - with almost constant moist cool weather - no summer, no winter. A laboratory for breeding Black Spot!! Sure enough, after the fourth year, 'Baby Love' succumbed completely to Black Spot, and now performs much worse than less acclaimed varieties.

The capacity to recover from infection is a feature of many of the heritage roses, which is why they have lasted so long. Many heritage rose varieties, even under adverse conditions, as in the tropical parts of India, can be grown without fungicide protection. A case in point is how the favorite garland rose, 'Rose Edward', which is grown over several thousands of acres in India, will contract both Mildew and Black Spot but come back victorious, and flower in delightful profusion every time.

We now come to another basic question. Is disease resistance linked to adaptation to specific climates? Can there be an universal great rose, or do we have to satisfy ourselves with roses adapted to climatic regions? Sadly, regional adaptation seems to be the rule. Even the great rose 'Peace' is quite unhappy in the Indo-Gangetic plain of northern India, where otherwise spectacular roses can be, and are, grown. But some of the shrub roses have wider adaptation, e.g., 'Prosperity', 'Carefree Beauty', 'Belinda's Dream'.

The performance of the tropical *R. clinophylla* and the sub-tropical *R. gigantea*, the two species with which I am working, illustrates the point. *R. clinophylla* was planted in the sandy and saline soil of Madras (now called Chennai) on the south-eastern coast of India, in a garden quite near the sea, where the water

had also become quite salty, owing to excessive pumping. Amazingly, the rose was quite happy despite very little attention, no sprays, no manures, and only the occasional watering by a rather erratic gardener. The Madras climate, warm and humid almost throughout the year, is one of the worst rose growing climates in India, but this rose has fresh green foliage and makes a nice bush.

When *R. clinophylla* was grown in the hot dry climate of Hosur, near Bangalore, in peninsular India, it again adapted itself remarkably well. One plant is 15 feet high and 10 feet across, in spite of the competition from the greedy roots of the nearby hedge. But *R. clinophylla* in the cool moist mountain climate of my Kodaikanal home in southern India, under my personal care, is clearly not very happy. Mind you, this is a climate in which the average rose thrives.

On the other hand *R. gigantea* is a spectacular success in Kodaikanal. Some of my plants have climbed about 40 feet into the cypress trees, flower profusely, and never, but never, get Mildew or Black Spot. Naturally, no spraying is feasible on a 40 foot high plant.

If the rose is a plant essentially adapted to climatic regions, we have to clearly hybridize roses for each region to get the optimum results. For the warm climate rose grower there is no doubt that a separate line of breeding, separate from the breeding lines in temperate regions, is clearly essential,

What should be the basis for such focused breeding? Obviously, we have to start with heritage roses well adapted to such climates. Of these, the Chinas like 'Louis Philippe', 'Craimoiisi Superier', 'Archduke Charles', and 'Old Blush'. Tea roses like 'Duchess de Brabant', 'Mrs. B.R. Cant', 'Rosette Delizy', 'Madame Falcot' and 'Mrs. Dudley Cross' and some of the Bourbons - 'Rose Edward', 'Maggie' ('Eugene E. Marlitt?'), 'Souvenir de la Malmaison', stand out in various warm climates ranging from peninsular India, southern United States, Puerto Rico, the West Indies, Bermuda and Brazil, and parts of Australia. Many of the Noiseties and a few of the Hybrid Perpetuals, for example, 'Frau Karl Druschki' and 'Paul Neyron', are similarly well adapted, as also some miscellancous shrub roses like 'Prosperity' etc. mentioned earlier.

Among the relatively modern roses, the extra vigorous ones - 'Queen

Elizabeth' and 'Montezuma', for example, are able to cope better with the warmth (but the average Hybrid Tea or Floribunda is very short-lived indeed).

Such roses, as well as *R. clinophylla* and *R. gigantea* form the basis for the new breeding line which is being developed. At this comparatively early stage of breeding it is well to remember that the rose in a tropical situation has to compete with many other beautifully luscious tropical plants, which are endowed with lovely evergreen foliage. It therefore becomes imperative to create roses which have equally beautiful evergreen foliage - such roses as are beautiful even when not in bloom, if the gardener in a warm climate is ever to grow roses. As it is, very few roses are being grown in these climates.

In addition to the foliage factor and disease resistance, the forcing conditions provided by tropical heat have to be taken into account. We need roses in the Tea-clinophylla line which are bushy and evergreen, and Gigantea hybrids of manageable size. Some of the new roses raised with this approach are already proving to be good performers in warm climates. We could mention Tea roses like 'Faith Whittlesey' and 'Garnet Crest', the hybrid Clinophyllas, 'Silver Dawn' and 'Ganges Mist', the Gigantea Tea, 'Alister's Gift', and the hybrid Giganteas like 'Naga Belle', 'Evergreen Gene', 'Amber Cloud' and 'Golden Threshold' (the latter three being climbers), as being well adapted. I confess that 'Amber Cloud' and 'Golden Threshold' could hardly be described as growing to a manageable size, but other good qualities justify inclusion. They are glorious in large gardens.

Further developments in the line include bringing in the foliage of *R. laevigata*, so well adapted to warmth and endowed with perhaps the most beautiful of rose foliage. The use of *R. roxburghii* also suggests itself, as such hybrids could well grow to the dimensions of small trees, and be the substitute for flowering cherries in the tropics.

The warm climates of the world, including many rapidly developing countries have so far been denied new roses which can be grown sustainably. And we rose breeders have to strive hard to change this situation so glaringly contradicting the claim that the rose is the world's favorite flower.

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R. roxburghii growing like a tree in Caerhays, Cornwall
(Girija Viraraghavan in front)



Faith Whittlesey - A new Tea rose which
does well in warm climates

Photo courtesy : M.S. Viraraghavan



George Burns



Julio Igesias

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